DC-8 11/18/16 - 11/19/16

Aircraft:
DC-8 (See full schedule)
Flight Number:
1163
Payload Configuration:
OIB-ATM NAV/ATM GPS/ATM-T5/T6/ATM FLIR/ATM CAMBOT MCoRDS/SNOW/Ku RADAR DMS/POS-AV GRAVIMETER & ARMAS (piggyback)
Nav Data Collected:
Yes
Total Flight Time:
11.1 hours
Submitted by:
Timothy Moes on 11/19/16
Flight Segments:

From:	SCCI - PUnta Arenas	**To:**	SCCI - Punta Arenas
Start:	11/18/16 13:57 Z	**Finish:**	11/19/16 01:04 Z
Flight Time:	11.1 hours		
Log Number:	178010	**PI:**	Nathan Kurtz
Funding Source:	Bruce Tagg - NASA - SMD - ESD Airborne Science Program		
Purpose of Flight:	Science		
Comments:	An excellent final science flight of the 2016 DC-8 OIB campaign. All science instruments reported good data capture except for some degraded performance on ATM T5. About 10% of the targets were clouded. The aircraft returned in good shape. These flight lines were first flown in 2014, designed to map elevation change in the area of the Larsen-D Ice Shelf, between the southern end of the Larsen-C and the northwestern Ronne ice shelves. . Large patches of blue ice were observed, including some along the cols and flanks of numerous nunataks. Multi-year sea ice was also observed and surveyed in the Weddell along the southwestern limits of the survey. A successful end to OIB?s 2016 Antarctic surveys.		

Flight Hour Summary:

	178010
Flight Hours Approved in SOFRS	300
Total Used	306.9
Total Remaining	-6.9

178010 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining
10/04/16	1135	Science	4	4	296
10/05/16	1136	Science	2.7	6.7	293.3
10/12/16	1138	Transit	10.9	17.6	282.4
10/12/16	1139	Transit	3	20.6	279.4
10/14/16 - 10/15/16	1140	Science	10.9	31.5	268.5
10/15/16 - 10/16/16	1141	Science	11.8	43.3	256.7
10/17/16 - 10/18/16	1142	Science	11.8	55.1	244.9
10/20/16 - 10/21/16	1143	Science	11.4	66.5	233.5
10/22/16	1144	Science	11	77.5	222.5
10/24/16 - 10/25/16	1145	Science	11.5	89	211
10/25/16 - 10/26/16	1146	Science	11.3	100.3	199.7
10/26/16 - 10/27/16	1147	Science	12.1	112.4	187.6
10/27/16 - 10/28/16	1148	Science	11.5	123.9	176.1
10/28/16 - 10/29/16	1149	Science	11	134.9	165.1
10/31/16 - 11/01/16	1150	Science	11	145.9	154.1
11/02/16 - 11/03/16	1151	Science	11.2	157.1	142.9

11/03/16 - 11/04/16	1152	Science	11.5	168.6	131.4
11/04/16 - 11/05/16	1153	Science	11.1	179.7	120.3
11/05/16 - 11/06/16	1154	Science	11.7	191.4	108.6
11/07/16 - 11/08/16	1155	Science	11.2	202.6	97.4
11/09/16 - 11/10/16	1156	Science	11.7	214.3	85.7
11/10/16	1157	Science	10.9	225.2	74.8
11/11/16 - 11/12/16	1158	Science	11.3	236.5	63.5
11/12/16 - 11/13/16	1159	Science	11.1	247.6	52.4
11/14/16	1160	Science	10.9	258.5	41.5
11/15/16 - 11/16/16	1161	Science	11.6	270.1	29.9
11/17/16 - 11/18/16	1162	Science	11.1	281.2	18.8
11/18/16 - 11/19/16	1163	Science	11.1	292.3	7.7
11/21/16	1165	Transit	11.6	303.9	-3.9
11/21/16	1164	Transit	3	306.9	-6.9

Flight Reports began being entered into this system as of 2012 flights. If there were flights flown under an earlier log number the flight reports are not available online.

Related Science Report:

OIB - DC-8 11/18/16 Science Report

Mission:
OIB
Mission Summary:

Mission: Larsen D (priority: low)

This flight was first flown in 2014, designed to map elevation change in the area of the Larsen-D Ice Shelf, between the southern end of the Larsen-C and the northwestern Ronne ice shelves. It is designed primarily along ICESat tracks, supplemented by a 2002 NASA-Chilean line along the Peninsula's ridgeline and a new extension to the south. This mission is a condensed version of the three missions designed for this area for the 2012 OIB campaign but not flown until 2014.

The forecast today favored only a couple of low-priority missions, but Larsen D was most promising for this last flight of the deployment. Weak winds resulted in some short stretches of low clouds, limiting ATM/FLIR/CAMBOT/DMS data collection, but otherwise weather was as forecast with a persistent but high-altitude layer. ATM estimates 90% data collection along total flight track. ATM T5 was also turned on and was stable during the first half of the flight, but its pulse stability degraded noticeably during the second half. T6 performed well throughout. Large patches of blue ice were observed, including some along the cols and flanks of numerous nunataks. Multi-year sea ice was also observed and surveyed in the Weddell along the southwestern limits of the survey. A successful end to OIB?s 2016 Antarctic surveys.

All instruments performed well overall. MCoRDS data recording failed for about 20 minutes during the flight.

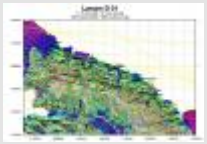
We conducted a ramp pass at 1500' on departure from PUQ.

Attached images are:
1. Map of today's flight

2. DC-8 shadow on a mountain in the Antarctic Peninsula (NASA / Maria-José Viñas)
3. Dirty blue ice, Antarctic Peninsula (NASA DMS / Dennis Gearhardt).
4. A canyon in shadow, Antarctic Peninsula (NASA DMS / Dennis Gearhardt).

Images:

Map of today's flight



Read more

DC-8 shadow on a mountain in the Antarctic Peninsula

Read more

Dirty blue ice, Antarctic Peninsula

Read more

A canyon in shadow, Antarctic Peninsula

Read more

Submitted by:
Joseph MacGregor on 11/19/16